

# THE GEOGRAPHY OF THE BELLEVUE AREA

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## INTRODUCTION

Bellevue, Ohio, is located on the north-south boundary line between the counties of Huron and Sandusky near the middle of the state east and west and twelve miles south of Sandusky Bay.

Bellevue lies on a poorly defined, sand dune covered section of Maumee Beach on the southern border of the Lake Plain. The sink hole topography in the neighborhood has given this town unusual drainage and water problems. The site was chosen for white settlement about one hundred and twenty-five years ago. From the rural simplicity of the pioneer day the present landscapes, including the culture, have unfolded gradually, stimulated by the development of the railroads, and by the limestone industry.

In the following chapters the natural environment is first described, then the pattern and functions of the landscapes before the railroad period, and finally the modern landscape influenced by the railroads.

## PHYSICAL CHARACTERISTICS

### TOPOGRAPHY

To the north of Bellevue extends the pro-glacial Lake Plain which runs roughly parallel to the southern shore of Lake Erie. This Plain is wider to the west, is broken into strips one and a half to five miles wide by the Whittlesey and Warren beaches, and attains an average total width of about twelve miles. Bellevue is on the southernmost of the three beach ridges, the Maumee, which forms the dividing line between the Lake Plain and the Till Plain. Sand dunes and sink holes have considerably modified the beach topography. The crest of the beach is ill-defined at Bellevue because it has suffered a long period of wind and water erosion. The central part of the town is on the gently northward sloping Lake Maumee plain. The northern edge of the beach, shaped roughly like a horse-shoe, enters the town limits at the northwest corner, swings to the south in a poorly defined line, and leaves the town boundary at the northeast corner. Its crest is broken on the west and south side of the town because of the numerous sand dunes, and on the eastern side intermittent and artificial stream work has etched into the beach. The altitudes of the three beaches are about 780', 740', and 680' above sea-level. They stand from 20' to 30' above the bordering Lake Plain and perceptibly above the Till Plain on its border though it rises south.

Their northern slopes, although steeper than their southern slopes, are still gentler than those farther east.

The beaches at this end of the Lake Plain do not stand out as conspicuously above the plain as they do toward Cleveland. They are generally better drained than the Lake Plain because of their elevation and their porous soils.

*The Lake Plain*—About one-half of the town of Bellevue lies on the Maumee Lake Plain, approximately 745' high in Bellevue. Sink holes and a few sand dunes modify the topography. This plain rises toward the south approximately 17' in a mile, steeper toward the Maumee beach and gentler toward the Whittlesey.

The Lake Plain in and west of Bellevue has an undulating surface due to the sand dunes and sink holes. Several areas among these features are poorly drained, even swampy, and spring rains cause water to stand for several days. Because of sinks and sub-surface drainage, streams are few, intermittent, and follow poorly developed valleys. One such valley, about 15' deep, on the eastern side of the town has been dredged. Most of the drainage is thus dependent upon the sink holes and porosity of the mantle rock, which are not sufficient during heavy rains.

*Glacial Plain*—The southernmost part of this town, south of Maumee beach, is on the level Till Plain. Feeble and intermittent streams also help to drain this plain. In the southeast corner of this town is a glacial kettle whose rim has been strengthened by man. This pond, called the Old Mill Pond, broke through its banks during the flood of 1936. They were hurriedly rebuilt and the pond left undrained although it now serves no particular use.

The sink holes<sup>1</sup> within this area are both natural and artificial. Eighteen or more natural sink holes occur within the town, each usually in a depression varying from 5' to 15' in depth and made by washing earth down the hole. These sometimes fill up with surface wash which has to be sucked or dug out to restore the drainage. About seven more are found in town on the Lake Plain and they continue northward as far as Castalia.

*A Geological Section*—The beach sands, the gravels of the ridges, and the stratified and thickly bedded lake clays of the Lake Plain form the mantle rock north and a varying layer of drift mantles all south. Glacial drift, which varies in thickness from 18' to about 80', underlies the lake sediments.

The Columbus limestone and the Lucas dolomite of the Devonian system form the bedrock for this region. Both are strong rock, and though shattered and disturbed some by solution slumping, are the basis for a valuable industry (6). The quarry is opened to a depth of approximately 45'. Beneath these Devonian rocks other limestones are known but no values have ever been discovered in them near Bellevue.

Caves and underground passages in this limestone are frequent. Some of the small caves in the region bordering the town have been filled in. Drillings for artificial sink holes vary from 32' to 248', where they reach crevices in the limestone that carry away water and waste.

<sup>1</sup>Hubbard, G. D., shown on a map of sink holes drawn in 1913.

## CLIMATE

Bellevue is in the Temperate Zone of cyclonic storms, and is on the borderline between Koppen's *cfa* and *cfo* types of climate; that is, a constantly moist climate with at least one month having a mean temperature of 64.4° F. May, June, and July have an average mean rainfall of over three inches per month, and all others over two inches. Thus during the growing season over half the annual amount of rain falls.

The three warmest months are June, July, and August. The combination of rain and high temperature assures a good growing season. Decreasing rainfall in August and fore part of September and the high temperature permit a successful harvest season in the adjoining farming regions.

Because of the proximity of Lake Erie, Bellevue and the adjoining regions have a longer growing season than is ordinarily expected. Lake Erie retards the spring and fall. The last average killing frost in the fall is between October 10 and 15. Thus the length of the growing season, 192 to 198 days, combined with the slow cooling in the fall and the slow rise of temperature in the spring encourages the growth of fruit crops such as cherries, peaches, and apples, and near the lake, grapes, which in turn influences the industries of this town.

## THE ABORIGINAL FOREST COVER

The early settlers who came to the site of this town called the area immediately to the west the "Oak Openings," where the larger forest trees were really "few and far between" and mostly white oak and hickory. The undergrowth consisted of small hickory, scrub oak, sassafras, spice, hazel, huckleberry, and alder. In the rest of Sandusky County the forests were generally made up of "white, black, red, scarlet, bur and pin oak, white and red (slippery) elm, white, black and blue ash, common and big shellbark hickory, smooth hickory, white and yellow poplar, cottonwood, linden (basswood), sugar maple, beech, black and white walnut, soft maple, buckeye, sycamore, hackberry, honey locust, willow, and iron wood," with only a little difference between the stock of higher and of lower, wetter land (5). Chestnut was found in few places, usually on the beaches. Maumee beach was called "Butternut Ridge" by the settlers because of its numerous butternut trees. This region is a transition between the Southern Hardwood (oak-hickory forest), and the Southern Chestnut (chestnut, oak, yellow poplar forest). The climate was warm enough to permit both types and the sandy soils favored the latter. The amount and distribution of the rainfall with the maximum in the summer and the long growing season explain the large size of some of the forest trees.

The area immediately to the east was called the "Prairies." This was formerly a part of the Maumee Lake Bed. The surface is remarkably level and underlain with a very fine soil. Consequently, this area is alternately too wet and too dry for the growth of trees except where locally a more porous soil prevails. As a result few trees grew, and prairies prevailed.

Many early settlers upon entering the "Prairies" and the "Oak Openings" judged that the soil was not fertile enough to produce crops because it did not produce many trees and so passed on to more heavily timbered country, expressing their regret after their mistake had been proven.

#### EARLY HUMAN OCCUPANCE

*Landscape During the Indian Period*—The area around Bellevue was occupied for an indefinitely long time before the appearance of white men. Burial mounds are found at various places in Sandusky County, usually along streams and beaches. One such mound was opened a few years ago by museum authorities within one-half mile of the west town corporation line. Because of the character of the remains in the mound and the imperfect construction of the earthworks scientists claim they belong to the Eries who were exterminated in the early 16th century by the Iroquois. These lands remained little more than hunting grounds for half a century or more until the Wyandots, Ottawas, and remnants of other dispersed tribes regained some power and returned. The Indians settled near the lake and streams and used the adjoining lands for hunting. Judged from the numerous arrowheads, tomahawks, and other Indian relics along the beach ridges these must have been used as trails, probably chosen because of their superior drainage.

The Indians depended on the indigenous wild life leaving the forest cover little altered. The prairies were burned over each fall because the deer were more easily tracked and hunted over the bare and blackened soil. They tilled some soil in a superficial way and often had short crops. The Indian was primarily a hunter and a tribal warrior until an overpowering enemy, the white man came. Because he exploited only the wild life of the forest and streams, which is almost non-existent today, he was semi-nomadic. He built no enduring institutions or lasting establishments. All there is left are a few earthworks or Indian mounds, arrowheads, charcoal, fish or clamshell heaps and place names adopted by the white settlers.

Although the Indian occupancy of the land was only semi-permanent it retarded the settlement of white men until treaties had been consummated with the United States government. In spite of these treaties the Indians desultorily occupied this territory and reluctantly gave up their hunting grounds.

*Indian Removal and Survey Period*—The story of the gradual encroachment of the white settler upon the Indian lands was the same as usual on the American frontiers. Ceding by the Indians began in 1785 when a two mile square in Sandusky County was acquired to build Fremont. Roadways 120 feet wide and adjacent farm lands were next granted. Cession was sometimes made for cash. In 1807 Surveyor Tappan wrote that all the Indians (Wyandot, Ottawa, Chippewa, Munsee, Delaware, Shawnee, and Pottawattamie tribes) had evacuated this tract of over three and a quarter millions of acres (3,366,000 acres).

Following the Indian removal from the "Firelands" the territory was occupied for about two years only by the surveyors of the Connecticut Land Company. The western boundary of the Connecticut

Reserve was run a little west of north instead of due north so that some of the springs north of Bellevue could be included. The drawing which established the ownership of these lands took place in November, 1808. Very few, if any, of these owners ever lived upon their lands. Thus during the interim between the time of the Indian removal and the white settlement there was little or no change in the landscape.

The owners then subdivided the land and sold parcels to the individual settlers who often selected the land after they arrived. On February 12, 1820 "The New Purchase" (lands west of the Connecticut Reserve) was carved into 14 counties of which Sandusky was one.

The Indians, The Connecticut Land Company, the late survey of the lands west of the "Firelands," and the War of 1812 retarded settlement in this part of Ohio until much later than in southern Ohio. The exceptionally cold summer of 1816 with frosts in New England every month stimulated their settlement.

*Pioneer Settlement in Pre-railroad Days*—In 1815 the first settler of Bellevue, Mark Hopkins, of Genessee County, N. Y., located with his family on Maumee beach about one-fourth mile from the eastern boundary of the town. In February, 1815, John Baker, from Cortlandt County, N. Y., located about two and one-half miles northeast from the first cabin. The first settlers drove their ox teams along the trails which followed the higher and better drained beach ridges to the sites of their respective farms. Much of the surface of the Lake Plain was marshy and as a consequence the beach ridges and the sand dunes directed the pattern of settlement.

When Bellevue was on the western fringe of settlement the first settlements were in scattered isolated clearings of the wilderness. Simple cabins of the rough-hewn, abundant logs with chimneys of stone and mud, and "shake" roofs formed the homes for the first settlers. The first crops of corn and forage were often raised among the stumps of hastily cleared land. With the abundance of wood and the necessity of speedy clearing men resorted to fire as the cheapest and easiest way of preparing the land for agriculture. Log rolling, where logs were cut and stacked into great piles, and burned, were so numerous and essential that they became a part of the social life of the pioneer. Rapidly the landscape changed into the rectangular, open fields waving with grain and dotted with woodland.

Subsistence farming was necessarily the most important occupation of the period. Corn, wheat, oats, potatoes, and vegetables were planted in the cleared spaces. Sheep and cattle grazed on the swamp land and the prairies until sufficient land had been cleared of trees and underbrush.

Hunting was another important employment of the early settlers and often supplied the greater amount of their subsistence. It was customary for families to live several months on a meat diet with no bread. Furs were used instead of money.

The forests furnished materials for the pioneer's home, furniture, tools and fences. The fruits, berries, nuts, wild honey, and the maple sugar were some of the important and needed products of the forest. The burning of deciduous hardwood furnished "black salts" often concentrated into "pearlash" or potash. This ash supplemented furs

for money. With these the pioneers bought salt, rifles, iron, cotton clothing, tea, and paid their taxes. The pioneer, unlike the Indian who depended upon the gifts of nature for a livelihood, exploited the forest and the soil.

Of necessity most of the manufacturing was done in the home; clothing, farm tools, candles and furniture. Every household was more self-sufficient than any of later date. In 1823 Nathaniel and Fred Chapman established the first retail business to supply some things that could not be made. The first manufactories to come were the grist and the saw mills usually run by little water powers. These depended upon the products of forest and soil. The settlers of this streamless sink hole area had to go east to permanent streams to set up their mills. Even here water wheels were not very dependable because of the freezing in winter, the level topography, and the occasional droughts. The first mill in this area was built in Lyme Township in 1818.

Blacksmithing, an industry necessary to the farmer settler was established here as early as 1817 and another quickly followed. The smiths not only shod horses but made axes, hammers, carts, harrows, all of a plow except the mold board, and many iron articles.

There was little surplus or sale of farm products. Transportation from this region was too difficult. The ox teams which were generally used were driven along the old Indian trails following the higher beach ridges to Lower Sandusky, (now Fremont) a trading post. Few bushels of wheat and corn followed this route, until 1825 when the Erie Canal opened a world market.

Early in the history of Bellevue the farmer pioneer settlers recognized the need of taverns on this beach ridge which led to the west. The first hotel (1816) was a log cabin standing near the center of the present town. Because of the nature of the roads taverns were numerous and travelers occasionally stayed at the same tavern two nights in succession, especially during spring rains.

*Roads and Settlement*—The early roads followed the Indian trails along the better drained beaches. The Maumee and Western Reserve Turnpike, a military road 120 feet wide, was built on a grant of land to extend from the Maumee River to the western boundary of the Connecticut "Firelands." Other roads crossed and fed travelers into this turnpike.

*The Embryo Village*—In 1824 this military road which had been ceded to the state of Ohio was laid out and established on its present line, with its eastern terminus at the Strong's Ridge road. This was the starting point for Amsden's Corners named for the settler who kept the tavern. When the north and south road came here the settlement was called York Cross Roads. It grew to the present Bellevue.

The Kilbourne Road was ultimately routed through York Cross Roads and stimulated its growth. It was followed by the route to Cold Creek or Castalia.

Strong's Ridge Road was preceded in the early years by the winding Indian beach trail. Later, in order to straighten the road to its present line, artificial gradings were made. In the unplanned town the higher, better drained, and more level land had been used for roads and home sites.

*Bellevue Surveyed and Laid Out*—In 1835, fifty acres on the Huron County side was laid out in village lots of varied sizes and prices, the average being one-quarter acre for \$50. In 1839 land on the Sandusky County side was surveyed and laid out. These lots were somewhat larger and in order to get settlers prices were lowered, terms were made easier, and speculators were discouraged. The town of Bellevue was incorporated January 25, 1851.

The settlers of these early days were of four different strains as shown by their names. The New York and New England influence is represented by the Woodward, Sheffields, Bakers, and Woods; the Pennsylvania Dutch by the Kerns, Leibachs, Hettters, and Wolfslagels; the English element by the Heals, Willses, and Potters; and the German strain by the Bollenbachers, Liebers, Ruffings, and the Biebrickers. In recent years Italians and a few negroes have been brought in by the railroads as a cheap labor supply. The best property and positions are held by people of the first four strains.

#### THE RAILROAD STAGES

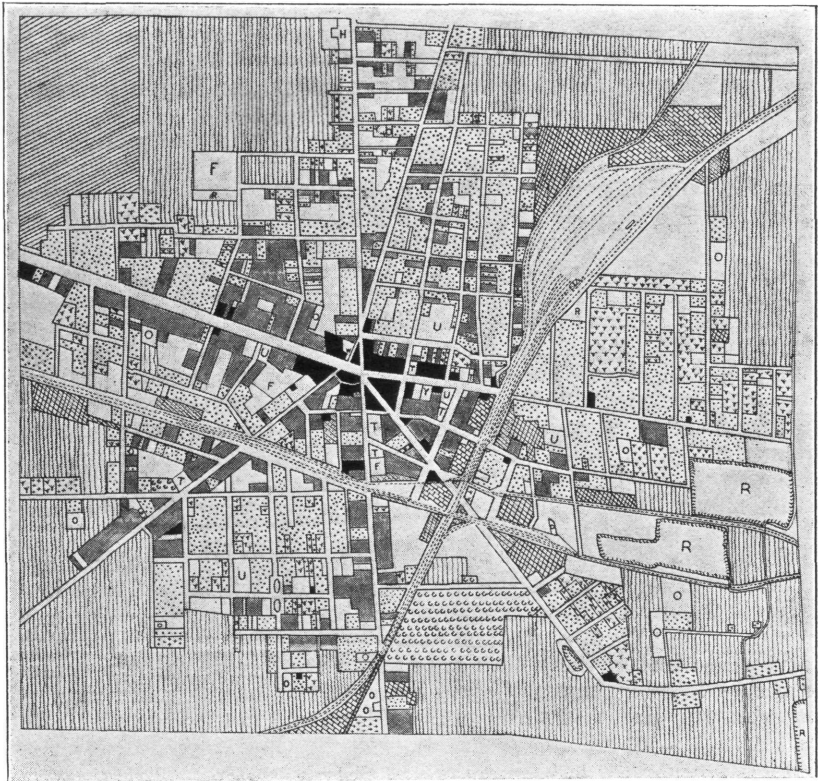
*The Coming of the Railroad*—The present history of the town is closely connected with railroad development. James H. Bell, a civil engineer of the Mad River and Lake Erie Railroad named this station Bellevue which suggested his name and his judgment of the site. This railroad was extended to Tiffin in 1841 and later to Springfield. In 1855 this route, from Sandusky to Tiffin, was changed to go by way of Green Springs and Clyde instead of Bellevue, but another railroad came soon.

In the early year the railroad was considered by most people as a great promoter of business because of the widened markets for the community through which it passed. As soon as the Toledo, Norwalk, and Cleveland Railroad was incorporated in 1852, Sandusky County voters authorized that \$50,000 of its stock be purchased. The road was completed in 1853. Today it is known as the Lake Shore and Michigan Southern Division of the New York Central.

After the coming of the railroad the growth of the town was steady and continuous. Shops and business establishments were erected. Population increased so that in 1869 the corporation limits of the town were enlarged from a mile east and west along Main Street and extending one-fourth of a mile north and south of this street to a mile and a half square. The town was still equally divided between the two counties. When Bellevue was incorporated the population was about 800, in 1873 it was about 3,500. Today it is over 6,800.

#### BELLEVUE TODAY

Bellevue, a compact settlement, is almost square. Because of the convergence of the main route which followed the ridge the Western Reserve Maumee Pike with the routes which come from the Lake Plain and because of the diagonal railroad routes which cross the town and intersect in it, Bellevue could be called a town of many angles. The Strong's Ridge road which followed Center Street was straightened to the present line of Main Street. This explains the awkward angle by



LAND UTILIZATION MAP  
OF  
BELLEVUE, OHIO  
SCALE

- |               |                  |           |
|---------------|------------------|-----------|
| INDUSTRIAL    | RESIDENTIAL      | PUBLIC    |
| MANUFACTURING | HOUSE AND GARDEN | SCHOOL    |
| QUARRYING     | HOUSE            | CHURCH    |
| AGRICULTURAL  | FARMSTEAD        | PARKS     |
| ORCHARD       | COMMERCIAL       | CEMETERY  |
| CROP          | BUSINESS         | HOSPITAL  |
| GARDEN        | OTHER USES       | TOWNHALL  |
| VACANT        | RAILROADS        | RESERVOIR |
|               | STORAGE          |           |



which Center Street comes into Monroe Street. Today the Huron side of Bellevue has a majority of the people because of its early start and because it was favored by the railroads. With the exceptions of the quarry and the Bellevue Manufacturing Company, industries and their laborers following the railroads, are located on the Huron or eastern side of the town.

The residential sections of the town are generally attractive. The better homes and broader lawns are located along the main streets away from the railroad and on the higher land west of the center of town. Along the Maumee Pike the strip of lawn between the curb and sidewalk is exceptionally wide, 20 feet on each side, because of the original land grant, and because of the broad, better drained beach ridge and dune area. The predominance of small homes, narrow lots, and well kept kitchen gardens proclaim a middle class population living comfortably on modest cash incomes. Most of these yards are planted with fruit trees and vines. The dilapidated homes of the Italian population along the Nickel Plate Railroad and southeast of the center of the town are not so attractive, with tiny lawns, the narrower lots, and proportionally larger kitchen gardens. In the backyards of most of these homes may be seen a small chicken house and few rabbit hutches fitting snugly beside a family garage. The only vacant houses in town in 1939 were two in this section.

Styles in architecture are extremely varied. The older, larger homes are in an ornate style, prevalent during the 80's. Three large limestone houses, two on Southwest Street and one on the Maumee Pike, date from the 30's, and reflect the proximity and durability of the limestone. Most of the homes are small, from one to two story frame structures to which rooms have been added as occasion has required and are a response to the cheapness of land and modest incomes. But few homes are of recent construction, suggesting the extremely slow expansion of population.

About 80 per cent of the Bellevue residences have limestone foundations. Brick, tile, or cement foundations of recent buildings indicate the attachment to local, serviceable, cheap, materials. Over 90 per cent of the sidewalks are of the Berea sandstone flagging which fact attests the relative cheapness of transportation from the Amherst Quarries 40 miles away during the development of this town.

The main roads of the town are brick of local clays, while many of the side streets are of crushed limestone.

The nucleus of the retail district is in the central part of the town, the "Corners," on Main Street for about four short blocks and a few doors down each of the side streets of this section.

The buildings of the retail district are not distinctive; one to two story brick or frame structures give a low profile and emphasize the relative cheapness of land. Salesrooms are on the first floors, professional and living apartments or storage rooms on the second. The neat stone fronts of the recently built bank buildings near the center of the town add a welcome note of modernity.

The merchandizing establishments are of the usual types: groceries, meat markets, furniture, clothing, dry goods stores, auto supply shops,

hardware and dime stores, shoe repair shop, drug stores, a news stand, feed stores, and garages with sales rooms for the popular and inexpensive automobiles. Five one-room groceries, often a room in a private home located from three to six blocks from the center of town, are a convenience for the local residents. The town possesses two movie houses. One runs but three days a week because the modern means of transportation encourage competition with the cinemas in Fremont, Norwalk, and Sandusky each about 15 miles away. The hardware store, handling farm implements extends its influence into surrounding agricultural regions. A barn for the storage and display of implements is located on cheap lands near the Nickel Plate Railroad. Filling stations occupy many of the corners in the town, especially those bordering state route No. 20, where heavier traffic runs.

Much expense and effort have been given to the cultural needs of the community. There are six school buildings, five of which are grade schools and scattered throughout the town. One parochial school is situated within two blocks of the nucleus of town. The public schools in the eastern and southern parts of town are farthest from the center ( $4\frac{1}{2}$  and  $5\frac{1}{2}$  blocks). All school buildings are brick structures.

Eleven different Christian denominations are represented in this town: the Catholic, Lutheran, Baptist, Episcopal, Reform, Congregational, Christian Scientist, Methodist, Evangelical, Church of The Nazarene, and The Church of God. The Catholic, Lutheran, Evangelical, and Reform churches are of brick, the Episcopal Church uses the durable, attractive limestone from the Bellevue quarry. The Congregational Church is a solid Ohio sandstone structure. The Baptist Church is a frame building. An attractive but scarcely durable stucco covering has been put on the Methodist and Christian Scientist Churches. The Church of The Nazarene and The Church of God are of more recent origin and thus occupy a room in commercial blocks in the retail section. The churches, with the exception of the Reform Church, are convenient and accessible. Each is on a main street, except the Baptist Church which is a half block north of Main Street.

Recreational facilities are found at the Y. M. C. A., in a large park used for baseball and other outdoor sports out where land is cheap; the high school stadium on the low level land just south of the sand dunes along Main Street a block west of the center of town.

On the outer zones of the residential and industrial sections of Bellevue is an irregular zone of agricultural land. This illustrates the relative cheapness of land within the corporation. Fifteen farmsteads are found within the town limits. Corn, small grains, hay, and pasture are the most popular crops. A small percentage of this outer zone remains vacant and unproductive, because of sink holes and the consequent poor drainage during the rainy season.

The railroads are the most important industry of Bellevue. The Lake Shore & Michigan Southern and the Wheeling and Lake Erie divisions of the New York Central cross in an east-west direction in the southern half of town. The Pennsylvania, only a freight road, the Nickel Plate Railroad (New York, Chicago, and St. Louis division) enter the town from the northwest and continue south, and the latter

turns and leaves the town at the southwest. Their depots are within two or three blocks of the center of town. The Nickel Plate has a terminal here for one division because Bellevue is situated on the level Lake Plain on the important transportation lines between large industrial centers of the country, and because it has plenty of land to offer railroads.

Approximately 650 residents work for the railroads in shops, yards, and on train service. Because the railroads consume about half the total town supply of water much anxiety is felt during dry years, such as 1934 and 1939.

The importance of the railroads may be estimated from the large amount of land in the town utilized by this cultural feature. They have cut diagonally across the town, disturbing the streets of the town and the property lines. On East Main Street (State Route No. 20) the motor traffic was often stopped by the numerous trains. Because of the continual loss of time and the inconvenience experienced, as well as a terrific accident, at this crossing, a subway bridge was completed in 1938. The railroads go over the motor road. Work was suspended for some time during the spring of 1936 because the excavation was completely submerged. In order to keep this depression free of the surface water after an ordinary rain, a \$7,000 electric pump has been installed to pump the water from the subway to adjoining sink holes.

Three mills stand beside the Lake Shore and Michigan Southern R. R. and the Wheeling and Lake Erie R. R., one at the intersection of these railroads with the Nickel Plate. Farmers of the surrounding area often sell their surplus grain at these mills and bring grain to be ground for stock food. Sometimes the mill ships this surplus grain by railroad or truck to larger markets, such as Cleveland. Lumber and coal yards are all near a railroad.

Two bakeries and four creameries are the chief subsistence industries. The dairies buy most of their milk from the farmers of the surrounding regions. Trucks collect it each day and bring it to the plants which are within the town, with one exception, where it is made ready for retailing. Each dairy does not employ more than half a dozen men.

Bellevue industrial establishments are not as much local necessities as in early days, but they are dependent on local products or market. Several are distinctly seasonal. A cherry cannery and a kraut and pickle company join with a pork packing company in the employ of 250 workers and the use of tons of sand dune cherries, beach cabbage and cucumbers, and many hogs of nearby farms. Bellevue and many of the nearby towns are supplied by means of delivery trucks with the products of these companies.

The Ohio Cultivator Company, employing about 200, meets the surrounding agricultural needs and makes use of two railroads.

Two companies manufacture iron and steel products, for a wide market, particularly through General Motors, Incorporated. All these industrial plants are near railroads and together give to Bellevue an industrial flavor and a smoky sky line or profile.

Public utilities, some of them privately owned, and the town newspaper give employment to nearly 20 people.

The France Stone Company is located at the limestone quarry on the northwestern edge of town. This quarry has been operated since early days; as a result, it is well into its second level cut and approximately 45 feet deep. About 150,000 tons of rock are quarried annually. Most of this is used for road materials for the surrounding areas. Other uses are for flux out of town, land lime on farms, and concrete blocks mostly in town. Because of the proximity of the quarry and the consequent cheaper transportation, the city is planning to use some of this stone for re-enforcing the walls of the reservoirs. Approximately 25 men are employed in this industry.

Bellevue depends upon surface water. Three large reservoirs, with combined capacity of 295,000,000 gallons, are located on the eastern side of the town. During dry years, such as 1934, this surface supply is not sufficient. A well 165 feet deep, with harder water, is then drawn upon, and the sprinkling of lawns and gardens is forbidden. In the fall of 1936 a new purifying plant was established near the middle reservoir, to insure a more healthful water. During an early period of growth the citizens of the town rejected a plan to get the town's water from Lake Erie. This vote has been regretted by many because the present water is harder than lake water with many chemicals in it which are detrimental to pipes and hot-water heaters, and the supply has been so limited in dry seasons that the chief industry of the town, the Nickel Plate Railroad, has threatened to remove its terminal.

The system for the disposal of sewage in Bellevue is unique. Natural and artificial sink holes are relied upon entirely. One natural sink accommodates as many as 12 houses, while an artificial sink accommodates from one to three. When an artificial sink is made, a well-driller bores a hole through the limestone bedrock until a wet crevice is reached. The city fire department is then called upon to test it. Water is poured down it and if the crevice can take the water as fast as it is given, the hole is pronounced satisfactory; if not, the well-driller continues to a crevice which does prove satisfactory. When the hole is found satisfactory, a perforated 6-inch iron pipe is inserted into the top and an area about 5 feet across and 10 feet deep is cemented or bricked for a cesspool. The perforated iron pipe has a plunger which can be worked occasionally without removing the heavy cement cover of the sink hole. Thus some of the surface wash and large articles are prevented from filling it up. However, frequently sink holes become choked with sediment and the owner of the property is burdened with the expense of re-drilling the hole. The deepest drilled sinks are found northwest of town around Euclid Avenue. A common depth is around 60 or 70 feet.

During the season of spring and fall rains the sink holes are not sufficient. The streets in the lower sections of the town are often flooded for several hours at a time and basements then have from one to three feet of unclean water at a time.

In 1913 and 1936 the spring rains in this and bordering regions to the south were exceptionally heavy. As a result, many of the sink holes became fountains and the surrounding areas became lakes. The water was six to twelve feet deep in some streets in the southern part of town. Here currents of considerable force caused damage to lawns

and property. Depressions not more than a foot across and a few inches deep developed into holes 20 feet or more across and three or four feet deep during these floods. The present sink hole method of handling the sewage is a menace to public health. Consequently, an order from the State Board of Health to install a sanitary sewage system may end it at any time.

The citizens of Bellevue are aware that the water supply problems and sewage disposal system are of growing importance. It is probable that in the near future Bellevue may draw upon Lake Erie for a better and more dependable supply of water.

Immediately to the west of Bellevue a settlement of a semi-rural character follows the ridge and well-drained sand dune area bordering the Maumee Pike. Because of their proximity most of the inhabitants consider Bellevue their chief shopping center.

Bellevue occupies a favorable position with relation to population centers of the United States which furnish markets for the manufactured and quarry products. The numerous railroads and hard-surfaced motor roads form excellent regional connections with these markets. Trucks do a large part of the hauling.

The metropolitan influence of Cleveland, Sandusky, and Toledo, may be seen in various features on the local landscape. The greater volume of traffic (especially the preponderance of freight traffic between Toledo and Cleveland) on the roads leading to these cities suggests their nearness and market value. Because of the proximity of these cities and excellent transportation facilities, their newspapers are distributed daily in Bellevue. The metropolitan influences are not all particularly beneficial. Local retail merchants as well as the chain stores depend upon the wholesale concerns in Cleveland and Toledo for their supplies because the improved transportation facilities allow this. The retail dry goods stores carry a limited stock of goods because much shopping is done in these larger cities. Shopping News from Cleveland is distributed weekly.

#### CONCLUSION

Bellevue resembles in history and development many towns of Ohio. It differs from a large number in having, especially in its early decades, a good roadway along the several old beaches. Beach towns, though on abandoned beaches, are quite different commercially from lake towns. Bellevue is unique in its water and sewage developments. Other towns along the north-south sink hole belt might have similar problems, but there were no other beaches across this belt to call for towns, hence Bellevue can be called unique in location and in its peculiar adjustments to its unique situation.

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